BIOLOGICAL TECHNICAL REPORT
FOR
BENNETT MINOR SUBDIVISION
TPM 20784/ER 03-21-009
GARZA MINOR SUBDIVISION
TPM 20777/ER 03-21-006
POWELL MINOR SUBDIVISION
TPM 20798/ER 03-19-028

PREPARED FOR:

Kimberly Bennett
3110 Camino Del Rio South, #309
San Diego, CA 92108

Joe Garza
1736 Geranium Place
Carlsbad, CA 92009

Ron Powell
4940 September Street
San Diego, CA 92110

PREPARED BY:

Robin Church
RC Biological Consulting, Inc.
4215 Spring Street, Suite 321
La Mesa, CA 91941
(619) 463-1072

July 2005

Robin Church
County Certified Biologist

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1.0 SUMMARY OF FINDINGS

This report represents a combined report for three proposed projects, TPM 20784 the Bennett Minor Subdivision, TPM 20777 the Garza Minor Subdivision and TPM 20798, the Powell Minor Subdivision. The County requested a combined report for the three parcels due to their adjacency and in order to better determine cumulative impacts for the three projects combined.

The Bennett project is a minor subdivision of a 49.74 gross acre parcel into four single-family residential parcels plus a remainder parcel. The five parcels have gross sizes ranging from 8.56 to 14.22 acres. The Bennett project also includes a 26.59 acre open space easement. The Garza project is a minor subdivision of a 53.33 gross acre parcel into four parcels plus a remainder parcel. The four parcels have gross sizes ranging from 8.48 to 9.09 acres, and the remainder parcel is 18.77 acres. The Garza project also includes a 27.95 acre biological open space easement. The Powell project is a minor subdivision of a 40 acre parcel into four single-family residential parcels. The four parcels have gross sizes ranging from 9.11 to 11.07 acres. The Powell project proposes 11.43 acres of open space.

These proposed project sites are located southwest of the community of Boulevard and west of Tierra del Sol and the Tecate Divide (Figure 1). The project areas are approximately 1-mile south of Highway 94 and 1/4 mile east of the Campo Indian Reservation. They are accessible from Shasta Lane and are located in Section 2, Township 18 South, Range 6 East. The project areas are shown on the Live Oak Springs 7.5' USGS Quadrangle (Figure 2).

This report provides information regarding existing conditions, compliance with the Resource Protection Ordinance (RPO), and proposes mitigation measures to reduce any impacts to below a level of significance.

General biological surveys, sensitive plant surveys, focused surveys for the Quino checkerspot butterfly and Resource Protection Ordinance Study to identify the limits of the RPO wetland were performed onsite. The biological resources on-site include four habitat types: southern coast live oak riparian forest which includes a RPO wetland, Redshank chaparral, semi-desert chaparral habitat, and developed land. The Resource Protection Ordinance would afford protection to the RPO wetland and buffer, the southern coast live oak riparian forest, the Redshank chaparral, and the semi-desert chaparral, which constitute sensitive habitat lands.

No state or federally listed plant or animal species were observed on-site. Two sensitive plant species: *Streptanthus campestris* (Southern jewelflower) and Desert beauty (*Linanthus bellus*) were observed on the Bennett and Powell properties and four sensitive plant species: Sticky Geraeaa (*Geraeaa viscida*), Jacumba milkvetch (*Astragalus douglasii* var. *perstrictus*), Tecate tarplant (*Deinandra floribunda*), and Desert beauty were observed on the Garza property. Tecate tarplant and Jacumba milkvetch are County list A species, while Sticky Geraeaa and Desert beauty are list B species. Four sensitive wildlife species were observed on all the sites: San Diego horned lizard (*Phrynosoma coronatum blainvillei*), Cooper's hawk (*Accipiter cooperii*), the San Diego black-tailed

jackrabbit (*Lepus californicus bennetti*), and the San Diego desert woodrat (*Neotoma lepida*). One sensitive animal species, the mountain lion (*Felis concolor*), has a high potential to occur. Two sensitive species, the ringtail (*Bassariscus astutus*) and southern mule deer (*Odocoileus hemionus*) have a moderate potential to occur onsite.

Potential impacts to 47.98 acres of semi-desert chaparral and 18.79 acres of redshank chaparral, will be mitigated at a 1:1 ratio with chaparral, in conformance with County Policy. This will result in a mitigation acreage of 66.77 acres of similar habitat. The proposed open space easement (65.95 acres) (Figure 3) includes 52.04 acres (1.89 acres are encompassed in the RPO Wetland and Buffer and can not be used as mitigation) of semi-desert chaparral and 7.85 acres of redshank chaparral for a total of 59.89 acres of chaparral. An additional 6.06 acres of southern coast live oak riparian forest is also included within the proposed open space making the total proposed open space compose 65.95 acres. This project will require the acquisition of 8.77 acres of semi-desert chaparral, redshank chaparral or similar habitat off-site. Together the proposed open space and off-site mitigation mitigates the locally important impact and ensures that the proposed project does contribute a significant cumulative impact within the region. In addition, 75% of the desert beauty population has been protected in open space. No impacts will occur to the other sensitive plant species onsite.

Implementation of the above mitigation measures will reduce potential impacts to below a level of significance and to preclude contributing a significant cumulative impact from the proposed project.

2.0 INTRODUCTION

This report represents a combined report for three proposed projects, TPM 20784 the Bennett Minor Subdivision, TPM 20777 the Garza Minor Subdivision and TPM 20798, the Powell Minor Subdivision. The County requested a combined report for the three parcels due to their adjacency and in order to better determine cumulative impacts for the three projects combined.

The Bennett project is a minor subdivision of a 49.74 gross acre parcel into four single-family residential parcels plus a remainder parcel. The five parcels have gross sizes ranging from 8.56 to 14.22 acres. The Bennett project also includes a 26.81 acre open space easement. The Garza project is a minor subdivision of a 53.33 gross acre parcel into four parcels plus a remainder parcel. The four parcels have gross sizes ranging from 8.48 to 9.09 acres, and the remainder parcel is 18.77 acres. The Garza project also includes a 26.50 acre biological open space easement. The Powell project is a minor subdivision of a 40 acre parcel into four single-family residential parcels. The four parcels have gross sizes ranging from 9.11 to 11.07 acres. The Powell project proposes 20.0 acres of open space.

These proposed project sites are located southwest of the community of Boulevard and west of Tierra del Sol and the Tecate Divide (Figure 1). The project areas are approximately 1-mile south of Highway 94 and 1/4 mile east of the Campo Indian Reservation. They are accessible from Shasta Lane and are located in Section 2, Township 18 South, Range 6 East. The project areas are shown on the Live Oak Springs 7.5' USGS Quadrangle (Figure 2).

Topography, Soils, Land Use

The Bennett project site is generally a broad gently sloping northerly-facing ridge with an un-named blue line stream passing through the eastern side of the parcel from south to north. Elevations onsite range from approximately 3740 feet above mean sea level along the south-central property line decreasing to approximately 3620 feet above mean sea level at the north-eastern portion of the property.

The Garza project site is generally a broad gently sloping northerly-facing ridge with the margin of an un-named blue line stream in the northeast corner. A smaller seasonal drainage is just off the project to the southwest. Elevations onsite range from approximately 3800 feet above mean sea level along the south-central property line decreasing to approximately 3680 feet above mean sea level at the north-eastern corner of the property.

The Powell project site is generally a broad gently sloping northwesterly-facing ridge. Elevations onsite range from approximately 3860 feet above mean sea level in the southeast corner decreasing to approximately 3720 feet above mean sea level at the northwest corner of the property.

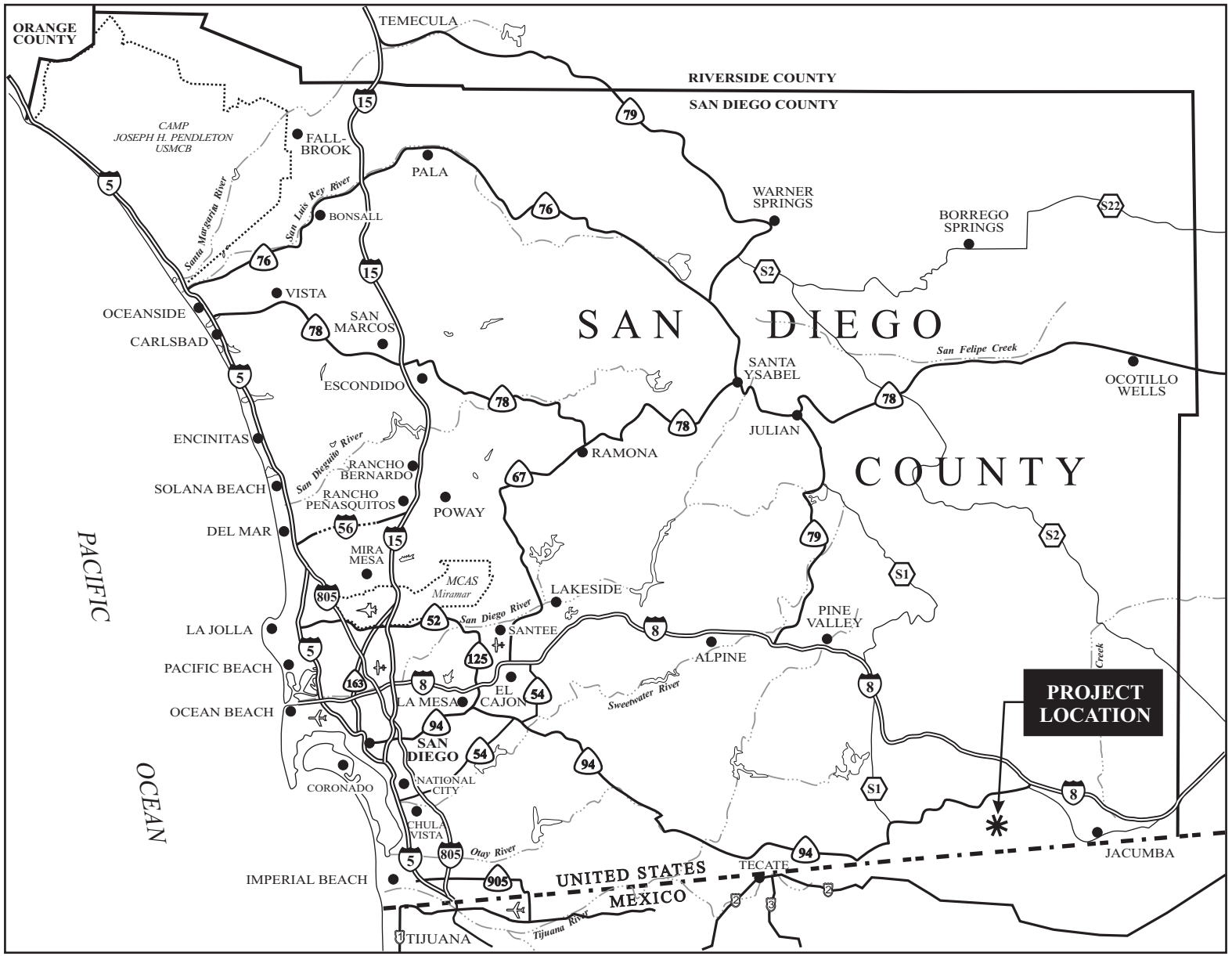
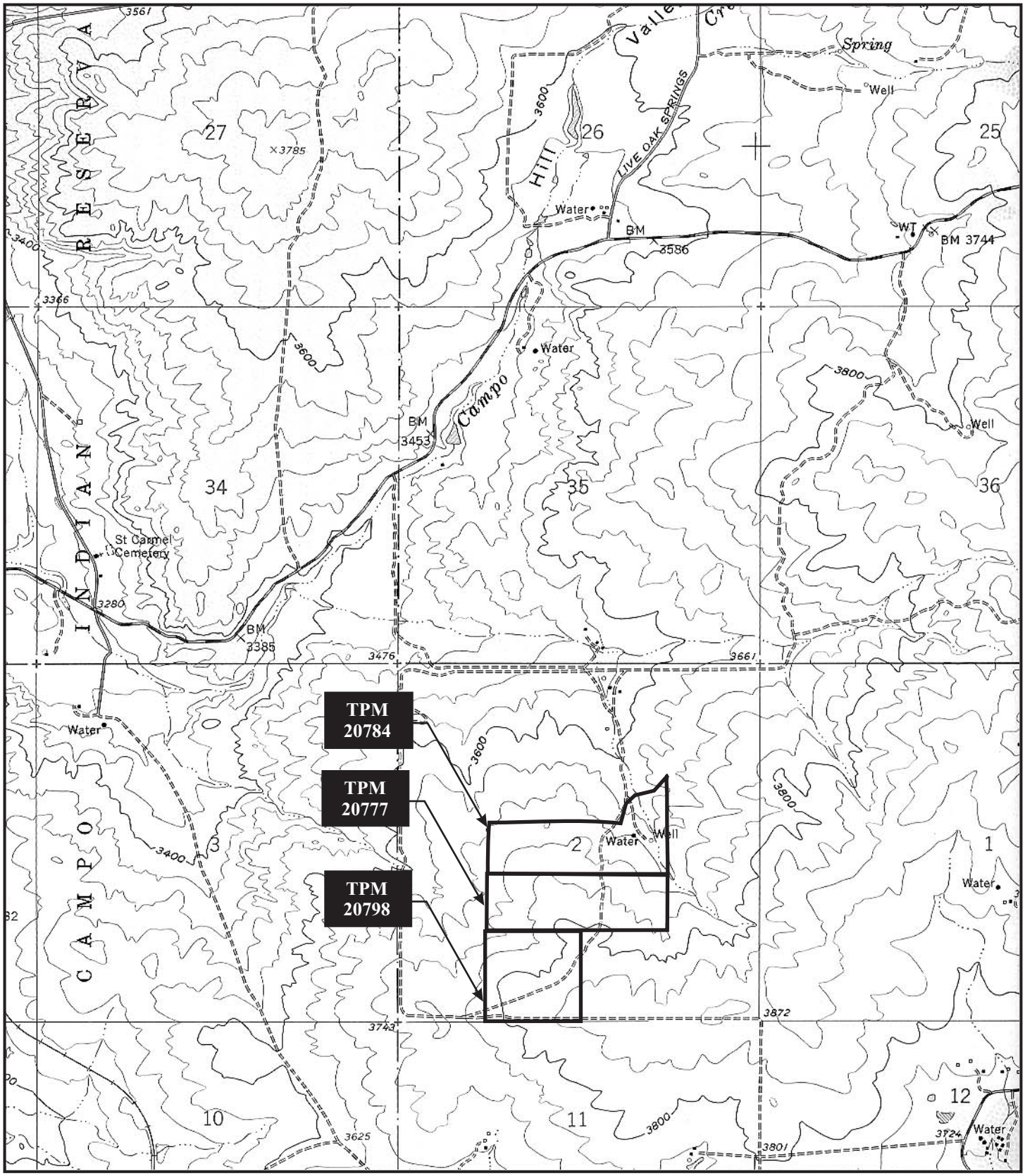


Figure 1
Regional Location Map



SOURCE: USGS 7.5' Live Oaks Springs Quadrangle

N

0 1000 2000

F E E T

Figure 2
Project Location

Three soil types occur on the Bennett and Gaza properties (Bowman 1973). These include La Posta loamy course sand, Kitchen Creek loamy coarse sand, and Mottsville loamy coarse sand. Two soil types occur on the Powell property (Bowman 1973). These include La Posta loamy coarse sand and Kitchen Creek loamy coarse sand. La Posta loamy coarse sand dominates the majority of the project.

La Posta loamy coarse sand is present on 5 to 30 percent slopes and usually occurs on gently rolling hills. This soil type is derived from granodiorite and is well drained. It dominates the higher areas of these projects

Kitchen Creek loamy coarse sand is also derived from weathered granodiorite and is present on broad ridges with 5 to 9 percent slopes. These soils are moderately deep and only a limited area of these soils are present in the southwestern portion of the project.

Mottsville loamy coarse sand is present along the main drainage course in the northeastern portion of the project area. It consists of excessively drained, very deep, loamy coarse sands. This soil has been formed from sediments transported from granitic rock and includes slopes of 2 to 9 percent (Bowman 1973).

Current land uses on the Bennett property include a house (under construction), an old water tank, a well, and undeveloped lands. An overgrown dirt road and minor footpaths cross through the project area and a maintained road services the well in the eastern part of the property.

Current land use on the Garza and Powell properties includes a house (under construction) and undeveloped lands. An overgrown dirt road and minor footpaths cross through the project area.

Regional Setting

The proposed project is located outside of the Multiple Species Conservation Program (MSCP). The site is located in area of rural residential and agricultural lands interspersed with undeveloped lands.

3.0 SURVEY METHODOLOGY

The three project sites were surveyed on foot and habitat mapped (Figure 3- Map Pocket). Mapping was performed following the Biological Resources Mapping Requirements (County 2002). Wildlife species were identified directly by sight or by vocalizations, and indirectly by scat, tracks, or burrows. Field notes were maintained throughout the surveys and species of interest were mapped. Surveys focused on sensitive plant and wildlife species and all species observed were noted. The presence or absence of suitable habitat for sensitive species was also identified.

Table 1 Surveys performed on the Bennett, Garza, and Powell Properties						
Date	**Time**	**Survey**	**Temperature (ºF)**	**Sky**	**Wind (mph)**	**Observers**
4/8/03	9:00-2:00	QCB Habitat Assessment	58º-62º	Partly cloudy	0-5	AP
4/11/03	8:00-2:00	QCB	60º-62º	Hazy	2-8	AP
4/15/03	9:30-3:30	QCB	66º-74º	Clear	0-7	AP
4/19/03	10:30-4:30	QCB	62º-65º	Clear	2-9	AP
4/24/03	9:30-3:00	QCB	63º-72º	Clear	0-7	AP
4/27/03	10:00-4:00	QCB	69º-65º	Clear	2-7	AP
5/1/03	9:30-3:30	QCB	62º-72º	Clear	0-3	AP
5/12/03	11:30-5:00	QCB	75º-72º	Hazy/ Clear	0-4	AP
5/17/03	8:00-2:00	General/Vegetation Mapping	70-78º	Hazy	0-5	RC
5/31/03	8:30-4:00	General/ Sensitive Plant Mapping	75º	Clear	0-5	AP
6/2/03	9:00-3:30	General/ Sensitive Plant Mapping	72º	Clear	0-5	AP
6/4/03	9:00-3:30	General/ Sensitive Plant Mapping	75º	Clear	0-3	AP
9/3/03	8:30-3:30	Sensitive Plant Survey	86º	Clear	0-3	AP
9/17/03	8:00 – 9:30	Wildlife Survey for Gaza and Powell projects only	71-78º	Clear	0-5	RC
9/20/03	7:20-1:00	Wildlife Survey	59-76º	Clear	0-4	RF, EP

AP=Andrew Pigniolo RC= Robin Church RF= Robert Faught EP= Eric Peffer

The primary focus of these surveys was to document and map the size, location, and general quality of all habitat types and the presence or potential presence of any sensitive resources (plant or wildlife) on-site. In addition, a focused presence/absence survey was performed for the quino checkerspot butterfly (*Euphydryas editha quino*). Seven (7) flight survey visits were conducted by Andrew R. Pigniolo (AP) (Permit #PRT-840623), for the presence of the federally-listed endangered quino checkerspot butterfly (QCB).

Nomenclature for this report conforms to Hickman (1993), for plants, Holland (1986) and Oberbauer (1996) for plant communities and habitat types, American Ornithological Union (AOU 1982) for birds, Jennings (1983) and Stebbins (1985) for reptiles and amphibians, Jones (1992) for mammals, and Powell (1979) for insects.

4.0 RESULTS

The following discussion summarizes the existing biological resources each site including habitats, vegetation and wildlife. Habitats are depicted on Figure 3.

Habitats

Habitat descriptions are based on the County of San Diego's Biological Mapping Requirements (County 2002) and Terrestrial Vegetation Communities in San Diego County based in Holland's Descriptions (Oberbauer 1996), however, it has been shown that habitats on the project sites in San Diego County are often not pristine and rarely fit into one description. Therefore the best-fit definition based on the County's current descriptions and dominant plant species has been applied. The habitats and wetland limits are depicted in Figure 3 (map pocket). A complete list of plant species observed on each site is included in Appendix A.

Sensitive Resources

Sensitive or special interest plant and wildlife species and habitats are those which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive habitats, as identified by these same groups, are those which generally support plant or wildlife species considered sensitive by these resource protection agencies or groups. Sensitive species and habitats are so called because of their limited distribution, restricted habitat requirements, particular susceptibility to human disturbance, degradation due to development or invasion by non-native species, or a combination of all of these factors.

In addition to RPO, the following were used in the determination of sensitive biological resources: U.S. Fish and Wildlife Service (USFWS) (USFWS 2001); California Department of Fish and Game (CDFG) (CDFG 1999, 2000 and 2001); and California Native Plant Society (CNPS 2001). An explanation of the sensitivity codes used in this report is included in Appendix E.

Applicable Resource Conservation Plans and Ordinances

In San Diego County, regulations have been adopted which define and provide protection to certain types of sensitive biological resources as follows:

Resource Protection Ordinance (RPO)

The purpose of the RPO is to protect sensitive resources and prevent their degradation and loss. The sensitive resources protected by the RPO include wetlands, wetland buffer areas, and sensitive habitat lands, which are defined as follows:

> "Wetland" areas include lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are “wetlands”:
>
> a) At least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places);
> b) The substratum is predominantly undrained hydric soil; or
> c) The substratum is nonsoil and is saturated with water or covered by water at some time during the growing season of each year.

"Wetland buffer" areas include lands which provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community.

"Sensitive habitat lands" include those which support unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants, including the area which is necessary to support a viable population of any of these species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning corridor.

Plants

Sensitive or special interest plant species are those which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive plant species are so called because of their limited distribution, restricted habitat requirements, or particular susceptibility to human disturbance, or a combination of these factors. Sources used for the determination of sensitive plant species include: CDFG (1999) and the California Native Plant Society Electronic Inventory (CNPS 2003).

Animals

Sensitive or special interest wildlife species and habitats are those which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive species are so called because of their limited

distribution, restricted habitat requirements, or particular susceptibility to human disturbance, or a combination of these factors. Sources used for the determination of sensitive biological resources include: USFWS (USFWS 2001), CDFG (CDFG 2000 and 2001). Additional species receive federal protection under the Bald Eagle Protection Act and the Migratory Bird Treaty Act and Convention for the Protection of Migratory Birds and Animals.

The CDFG also lists species as threatened or endangered, or candidates for listing as threatened or endangered. Lower sensitivity animals may be listed as "species of special concern" (CDFG 2000). The CDFG further classifies some species under the following categories: "fully protected", "protected furbearer," "harvest species," "protected amphibian," and "protected reptile." The designation "protected" indicates that a species may to be taken or possessed except under special permit from the CDFG; "fully protected" indicates that a species can be taken only for scientific purposes. The designation "harvest species" indicates that take of the species is controlled by the state government.

4.1 Results for Bennett – TPM 20784

The following discussion summarizes the existing biological resources on the site including habitats, plant and wildlife species.

4.1.1 Vegetation

The Bennett Property supports four habitat types, southern coast live oak riparian forest, Redshank chaparral, semi-desert chaparral, and developed.

Southern Coast Live Oak Riparian Forest (Habitat Code: 61310)

The southern coast live oak riparian forest onsite is composed of mature coast live oaks (*Quercus agrifolia*) that are located on the banks of the wide drainage. The oaks form a continuous canopy in the southern portion of the project but a large gap along the drainage without oaks is also present and the trees are more sparse in the northeastern portion of the property. The southern coast live oak riparian forest is along a drainage with a seasonal stream within the bottom and constitutes an RPO wetland which is discussed in more detail below. The oaks are primarily located outside of the limits of the wetland forming a canopy that overhangs the stream. Approximately 4.79 acres of this habitat occurs onsite.

Redshank Chaparral (Habitat Code: 37300)

An area of undisturbed Redshank chaparral is located in a lower slightly more mesic area in the northeastern portion of the project area. This area is a slightly depressed north facing slope that drains nearby areas. Redshank chaparral covers approximately 6.12 acres of the project. It consists of nearly pure stands of tall (between 2 to 4 meters) redshank (*Adenostoma sparsifolium*). A variety of understory species including sticky geraeaa (*Geraeaa viscida*), moss bedstraw (*Galium andrewsii*), and basketbush (*Rhus trilobata*) are also present. Small sandy openings include wolly-star (*Eriastrum*

sapphirinum), desert beauty (*Linanthus bellus*), spinebract (*Oxytheca trilobata*), and several species of popcorn flower (*Cryptantha/Plagiobothrys* spp.).

Semi-desert Chaparral (Habitat Code: 37400)

Undisturbed semi-desert chaparral covers approximately 36.28 acres of the site and consists of moderate-statured stands (between 1.5 and 3 meters) of a variety of chaparral species. Chamise (*Adenostoma fasciculatum*) and scrub oak (*Quercus berberidifolia*) are dominant but several other species are common: redshank, birch-leaved mountain-mahogany (*Cercocarpus betuloides*), buckbrush (*Ceanothus cuneatus*), Mexican manzanita (*Arctostaphylos pungens*), bigberry manzanita (*Arctostaphylos glauca*), holly-leaf redberry (*Rhamnus ilicifolia*), and holly-leaf cherry (*Prunus ilicifolia*).

This chaparral forms a mosaic with sandy openings and open areas with low shrubs dominated by annual vegetation. Some of the sandy openings are completely dominated by native annuals while other openings include a low cover of sub-shrubs including flat-top buckwheat (*Eriogonum fasciculatum*), and deer weed (*Lotus scoparius*), with a few individuals of California ephedra (*Ephedra californica*). These natural openings include few weed species and have not yet been invaded by non-natives. This habitat allows for seasonal growth of many annual species dominated by goldfields (*Lasthenia californica*), wild-heliotrope (*Phacelia distans*), chia (*Salvia columbariae*), silver puffs (*Microseris lindleyi*), mustard evening primrose (*Camissonia californica*), field suncup (*Camissonia hirtella*), wolly-star (*Eriastrum sapphirinum*), ball gilia (*Gilia capitata abrotanifolia*), desert beauty, spinebract, and several species of popcorn flower.

Developed (Habitat Code: 12000)

Approximately 2.55 acres of developed habitat occurs onsite. This area is associated with a house under construction, water tank, well, and dirt access roads.

Resource Protection Ordinance (RPO) Wetland

A RPO wetland delineation was performed to identify the portion of the un-named blue line stream onsite meets the criteria established by the RPO to define County wetlands. The criteria for the delineation of RPO wetlands is discussed in Section 5.0, Regulatory Requirements, below. The limits of the RPO wetland are depicted on Figure 3.

Rock Outcrops

Rock outcrops are considered a unique microhabitat by the County. Several rock outcrops occur onsite. Rock outcrops add diversity to the vegetation communities by providing a discrete ecological niche for species not found elsewhere in the surrounding habitat. Rock outcrops also provide cover and potential nesting cavities for several wildlife species. Some reptile species are attracted to the sun-warmed surfaces of the rocks, and birds use boulders as perches and vantage points.

4.1.2 Wildlife

A total of fifty-two wildlife species were identified onsite. These included twenty invertebrate species, four reptile species, nineteen bird species, and nine mammal species. A complete list of wildlife species observed on-site is included as Appendix B.

Invertebrates

The dominant invertebrate species observed onsite were butterflies. Of the twenty invertebrates observed onsite, all but four were butterflies. Common butterflies observed onsite include the common white (*Pontia protodice*), Behr's metalmark (*Apodemia mormo virgulti*), funereal duskywing (*Erynnis funeralis*) and California sister (*Adelphia bredowii*). In addition, grasshoppers, lady bugs, tarantula hawks and velvet ants were observed onsite.

Reptiles

Side-blotch lizards (*Uta stansburiana*) and sagebrush lizards (*Sceloporus graciosus*) were commonly observed sunning on the large rocks throughout the site. Two additional reptile species were observed onsite, gopher snake (*Pituopis catenifer*), and San Diego horned lizard (*Phrynosoma coronatum blainvillei*).

Birds

Birds that would typically occur in the habitats onsite were observed including but not limited to: California thrasher (*Toxostoma redivivum*), spotted towhee (*Pipilo erythrophthalmus*), lesser goldfinch (*Carduelis psaltria*), California quail (*Callipepla californica*), scrub jay (*Aphelocoma californica*), wrentit (*Chamaea fasciata*) and Nuttal's woodpecker (*Picoides nutallii*). In addition, a pair of Cooper's hawks were observed in the southern coast live oak riparian forest.

Mammals

Mammals were primarily detected indirectly by the presence of track, scat, nests or burrows. Mammals detected indirectly onsite include but are not limited to coyote (*Canis latrans*), mountain lion (*Felis concolor*), desert woodrat (*Neotoma lepida*), and brush rabbit (*Sylvilagus bachmani*). Two species were detected by direct observation, and desert cottontail (*Sylvilagus audubonii*) and white-tail antelope squirrel (*Ammospermophilus leucurus*).

4.1.3 Sensitive Habitats

Southern coast live oak riparian forest, redshank chaparral, semi-desert chaparral, and RPO wetlands would be considered sensitive habitats. Each of these habitats is discussed below.

Southern Coast Live Oak Riparian Forest

Southern coast live oak riparian forest is considered a sensitive habitat land within RPO. In addition, a portion of the forest would be considered a RPO wetland. Wetland habitats, in general, are considered sensitive biological resources because they have been dramatically reduced in San Diego County and across the nation. Due to the regional and national loss of wetland habitat, resource agencies have a "no net loss policy" for wetlands. Wetland habitat is important because it has high levels of food and nutrients, high wildlife diversity, and it is a valuable water source in the arid climate of southern California. Oak woodlands and oak trees are considered sensitive throughout the County. Oak woodlands are valuable for their ecological function and their aesthetic value. This habitat type has declined dramatically throughout the region.

Redshank Chaparral

Although still a relatively plentiful habitat, Redshank chaparral is considered a sensitive habitat land within the RPO.

Semi-desert Chaparral

Although still a relatively plentiful habitat, semi-desert chaparral is considered a sensitive habitat land within the RPO.

Resource Protection Ordinance Wetland

Wetlands are protected by the County, CDFG, ACOE, RWQCB, USFWS, and EPA. Wetland habitats, in general, are considered sensitive biological resources because they have been dramatically reduced in San Diego County and across the nation and typically represent wetlands. Due to the regional and national loss of wetland habitat, resource agencies have a "no net loss policy" for wetlands. Wetland habitat is important because it has high levels of food and nutrients, high wildlife diversity, and it is a valuable water source in the arid climate of Southern California. This habitat's sensitivity and its ultimate reduction is evidenced by the large number of declining bird species closely associated with, or dependent on this habitat type for reproduction and ultimate success.
A RPO wetland delineation was performed to delineate the limits of the creek that meet the criteria established by RPO. The limits of this boundary are indicated on Figure 3.

4.1.4 Sensitive Plants

Sensitive plant surveys were performed in addition to the focused QCB surveys. In addition to the spring survey, a fall survey was performed specifically to determine the presence or absence of Tecate tarplant (*Deinandra floribunda*). No threatened or endangered plant species were observed onsite. Four sensitive plant species: Sticky geraeaa (*Geraeaa viscida*), Jacumba milkvetch (*Astragalus douglasii* var. *perstrictus*), Tecate tarplant (*Deinandra floribunda*), and Desert beauty (*Linanthus bellus*) were observed onsite. These species are discussed below.

Linanthus bellus (Desert beauty)

Linanthus bellus is a low annual herb that lives in sandy openings in chaparral. Its showy flowers are often larger than its diminutive vegetation. This species is on County list B and is a CNPS List 2 species (rare, threatened, or endangered in California but more common elsewhere) with a R-E-D ranking of 2-1-1. The distribution of this species in the United States is limited to southern San Diego County but it also occurs in adjacent Baja California. Scattered populations of desert beauty are present in sandy openings within the project area. Most of these populations are near the heads of very minor washes (Figure 3). Nine populations totaling approximately 550 plants were present along minor drainages and sandy slopes that feed the major drainage in the eastern part of the project.

Deinandra floribunda (Tecate tarplant)

Deinandra floribunda is a annual herb in the Asteraceae family. This species is on County list A and CNPS List 1B species (plants rare, threatened, or endangered in California and elsewhere) with a R-E-D ranking of 2-2-2. It is known from scattered populations from San Diego County and northern Baja California. This species occurs in open seasonal drainages within chaparral and oak woodland. Within the project area, two populations are present along the drainage along the eastern side of the project. The main population is located below the earthen dam in the main drainage channel. The area is very open and the population includes 35 plants. A single plant was also located in the southeastern portion of the project along the drainage channel.

Geraeaa viscida (Sticky Geraeaa)

Geraeaa viscida is a perennial herb in the Asteraceae family. This species is on County list B and CNPS List 2 species (plants rare, threatened, or endangered in California but more common elsewhere) with a R-E-D ranking of 2-1-1. It is known from scattered populations from Imperial, San Diego County, and northern Baja California. This species occurs chaparral, often in disturbed areas, which probably reflects its nature as a fire follower. Within the project area, it is focused along the same more mesic area as the Redshank chaparral. Much of the *Geraeaa viscida* is an understory to the Redshanks but it is also present in some sandy openings. The population includes approximately 260 plants.

Astragalus douglasii var. *perstrictus* (Jacumba milkvetch)

Astragalus douglasii var. *perstrictus* is a perennial herb in the Fabaceae family. This species is on County list A and CNPS List 1B species (plants rare, threatened, or endangered in California and elsewhere) with a R-E-D ranking of 2-2-2. It is known from scattered populations in Imperial, San Diego County, and northern Baja California. This species occurs in chaparral, oak woodland, and valley grassland. Within the project area scattered plants are located along the drainage along the eastern side of the project. Plants are focused on sandy terraces marginal to the main drainage channel. The area is open and the population includes 12 plants.

Additional Potential Sensitive Plant Species

Five additional sensitive plant species are known from the area: Fremont barberry (*Berberis fremontii*), delicate clarkia (*Clarkia delicata*), narrow-petaled rein orchid (*Piperia lepropetala*), Engelmann oak (*Quercus engelmannii*) and southern jewel flower (*Streptanthis campestris*). All of the species would have been observable during the surveys performed onsite.

4.1.5 Sensitive Animals

No rare, threatened, or endangered animal species were observed on-site. Four sensitive animal species, the San Diego horned lizard, Cooper's hawk, mountain lion, and San Diego woodrat were observed onsite. Each of these species is discussed below.

San Diego horned lizard (*Phrynosoma coronatum blainvillei*)

The San Diego horned lizard is a regional subspecies of the widespread coast horned lizard, classified as a federal Species of Concern. This spiny, wide-bodied lizard occurs primarily in open scrub communities. It was a common species in San Diego County until about 10 years ago (Hix 1990). Factors that have contributed to its decline include loss of habitat, over collecting, and the introduction of exotic ants. In some places, especially adjacent to urban areas, introduced ants have displaced native harvester ants (*Pogonomyrmex* spp.) upon which the lizard feeds exclusively. Five San Diego horned lizard was observed onsite (Figure 3).

Cooper's Hawk (*Accipiter cooperi*)

The Cooper's hawk when nesting is listed as a California Special Concern species by California Department of Fish and Game. This species is a year-long resident in southern California. It is most likely to occur in areas with dense stands of live oak, riparian deciduous, or other forest habitats near water. Two individuals of this species were observed onsite, primarily in the southern coast live oak riparian forest where they had a nest.

Mountain Lion (*Felis concolor*)

The mountain lion is a County sensitive species. Mountain lions require extensive areas of riparian vegetation and brushy stages of various habitats with interspersions of irregular terrain, rocky outcrops and tree/brush edges. One individual was identified onsite by the presence of scat.

San Diego desert woodrat (*Neotoma lepida intermedia*)

The San Diego desert woodrat is a state and federal Species of Concern. This species was identified onsite indirectly by the presence of nests and scat. The nests were primarily associated with rock outcrops.

Additional Potential Sensitive Wildlife Species

Twenty-one sensitive species have the potential to occur onsite and are discussed in Appendix D. Of the twenty-one species, one, the San Diego black-tailed jackrabbit (*Lepus californicus bennetti*), has a high potential to occur. This species was observed on the adjacent property. Two sensitive species, the ringtail (*Bassariscus astutus*) and southern mule deer (*Odocoileus hemionus*) have a moderate potential to occur onsite. The ringtail and San Diego black-tailed jackrabbit are a state species of concern. The southern mule deer is a County sensitive species. In addition, one federally listed species, the Quino checkerspot butterfly, has a low potential to occur onsite. This species is discussed below.

Quino Checkerspot Butterfly (*Euphydryas editha quino*)

Status: Federally listed as Endangered.

A focused survey for the federally endangered quino checkerspot butterfly (QCB) was conducted onsite by USFWS permitted biologist Andrew Pigniolo (permit # PRT-840623). A complete copy of the report is included as Appendix F and summarized here. Survey methods followed those outlined in the Year 2002 Survey Protocol for the Quino checkerspot butterfly (USFWS 2002). Surveys consisted of meandering transects within all of the open native vegetation on site, with proportionally greater time was spent within areas supporting nectar plants, potential host plants, and on the minor ridges. The primary larval host plant, dwarf plantain (*Plantago erecta*) was not observed onsite. Two other plant species that may support larval QCB were observed onsite: Southern Chinese houses (*Collinsia concolor*) and White snapdragon (*Antirrhinum coulterianum*). Potential nectar sources for QCB were plentiful including moderately dense populations of popcorn flower (*Cryptantha/Plagiobothrys* spp.), chia (*Salvia columbariae*), and Goldfields (*Lasthenia californica*). Sixteen butterfly species were observed onsite (Appendix B).

QCB was not observed onsite during the survey. Although several potential host plants and numerous nectar plants were observed on-site, the site lacks the primary host plant, dwarf plantain. The site does not support clay soils or well developed cryptogrammic crusts. Vegetation on the site is fairly mesic, supporting primarily tall-statured chaparral species. Openings included numerous nectar sources and the project area includes a ridgeline but the Quino Checkerspot was not observed. Because native vegetation is dynamic over time and QCB populations are spatially and temporally dynamic, it is difficult to definitively determine its absence. Based on this survey, the current site conditions, and observations of occupied QCB habitat, the probability of QCB occurring the Bennett Property is low.

4.2 Results for Garza – TPM 20777

The following discussion summarizes the existing biological resources on the site including habitats, plant and wildlife species.

4.2.1 Vegetation

The Garza Property supports four habitat types, southern coast live oak riparian forest, redshank chaparral, semi-desert chaparral and developed.

Southern Coast Live Oak Riparian Forest (Habitat Code: 61310)

The southern coast live oak riparian forest onsite is composed of mature coast live oaks that are focused around a bedrock outcrop and also located on the banks of a narrow, steep sided drainage. The rock outcrop appears to form a natural dam providing additional moisture to the area. The side of the drainage is limited to a small portion of the northeast corner of the project. The stream occurs within the bottom of the drainage and constitutes an RPO wetland which is discussed in more detail below. The oaks are primarily located outside of the limits of the wetland forming a dense canopy that overhangs the stream and rock outcrop. Approximately 1.71 acres of this habitat occurs onsite. Approximately 1.71 acres of this habitat occurs onsite.

Redshank Chaparral (Habitat Code: 37300)

Redshank chaparral covers approximately 1.66 acres of the project site. It consists of nearly pure stands of tall (between 2 to 4 meters) redshank. A variety of understory species including moss bedstraw, and basketbush are also present. Small sandy openings include wolly-star, desert beauty, spinebract, and several species of popcorn flower.

Semi-Desert Chaparral (Habitat Code: 37400)

Undisturbed semi-desert chaparral covers approximately 49.96 acres of the site and consists of moderate-statured stands (between 1.5 and 3 meters) of a variety chaparral species. Chamise and scrub oak are dominant but several other species are common: redshank, birch-leaved mountain-mahogany, buckbrush, Mexican manzanita, bigberry manzanita, holly-leaf redberry, and holly-leaf cherry (*Prunus ilicifolia*). An ephemeral drainage occurs within this habitat.

This chaparral forms a mosaic with sandy openings and open areas with low shrubs dominated by annual vegetation. Some of the sandy openings are completely dominated by native annuals while portions of the highest ridge include openings with a low cover of sub-shrubs including flat-top buckwheat, and deer weed, with a few individuals of California ephedra. These natural openings include few weed species and have not yet been invaded by non-natives. This habitat allows for seasonal growth of many annual species dominated by goldfields, wild-heliotrope, chia, silver puffs, mustard evening primrose, field suncup, wolly-star, ball gilia, desert beauty, spinebract and several species of popcorn flower.

Resource Protection Ordinance (RPO) Wetland

A RPO wetland delineation was performed to identify the portion of the un-named blue line stream onsite meets the criteria established by the RPO to define County wetlands. The limits of the RPO wetland are depicted on Figure 3.

Rock Outcrops

Numerous rock outcrops occur onsite.

4.2.2 Wildlife

A total of fifty-two wildlife species were identified onsite. These included eighteen invertebrate species, six reptile species, eighteen bird species, and ten mammal species. A complete list of wildlife species observed on-site is included as Appendix B.

Invertebrates

The dominant invertebrate species observed onsite were butterflies. Of the eighteen invertebrates observed onsite, all but four were butterflies. Common butterflies observed onsite include the common white, Behr's metalmark, funereal duskywing and California sister. In addition, grasshoppers, lady bugs, tarantula hawks and velvet ants were observed onsite.

Reptiles

Side-blotch lizards and sagebrush lizards were commonly observed sunning on the large rocks throughout the site. Four additional reptile species were observed onsite, western fence lizard (*Sceloporus occidentalis*), gopher snake, San Diego horned lizard, and southern alligator lizard (*Gerrhonotus multicarinatus*).

Birds

Birds that would typically occur in the habitats onsite were observed including but not limited to: California thrasher, spotted towhee, lesser goldfinch, California quail, scrub jay, wrentit and northern flicker (*Colaptes auratus*). In addition, a turkey vulture was observed overhead (*Cathartes aura*).

Mammals

Mammals were primarily detected indirectly by the presence of track, scat, nests or burrows. Mammals detected indirectly onsite include but are not limited to black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), desert woodrat (*Neotoma lepida*), and grey fox (*Urocyon cinereoargenteus*). Two species were detected by direct observation, brush rabbit (*Sylvilagus bachmani*) and desert cottontail (*Sylvilagus audubonii*).

4.2.3 Sensitive Habitats

Southern coast live oak riparian forest, semi-desert chaparral, redshank chaparral and RPO wetlands would be considered sensitive habitats. Each of these are discussed in 4.1.3. In addition to being sensitive as a habitat, the semi-desert chaparral onsite contains an ephemeral drainage that may be within the jurisdiction of the California Department of Fish and Game occurs within this habitat.

4.2.4 Sensitive Plants

Sensitive plant surveys were performed in addition to the focused QCB surveys. In addition to the spring survey, a fall survey was performed specifically to determine the presence or absence of Tecate tarplant. No threatened or endangered plant species were observed onsite. Two sensitive plant species, southern jewelflower (*Streptanthus campestris*) and desert beauty were observed on-site. These species are discussed below.

Linanthus bellus (Desert beauty)

Three populations were present along minor drainages that feed the major drainage just outside the project to the northeast. Another two populations are present in the southwestern portion of the project along a small drainage in this area. Approximately 455 occur onsite as a result of counts.

Streptanthus campestris (Southern jewelflower)

Streptanthus campestris is a perennial herb in the Brassicaceae family. This species is on County list A and CNPS List 1B species (plants rare, threatened, or endangered in California and elsewhere) with a R-E-D ranking of 2-1-2. It is known from less than 20 scattered populations from San Bernardino County to northern Baja California. This species can occur in rocky habitats within chaparral as well as lower montane coniferous forest and pinyon and juniper woodland. Within the project area, two populations are present in association with the rock outcrop that forms a roughly linear feature in the northeast corner of the project area. This outcrop appears to interrupt groundwater flow creating a slightly wetter habitat and extending the southern coast live oak riparian woodland out of the nearby drainage. The southern jewelflower populations were noted as shaded understory species to coast live oak and coffeeberry (*Rhamnus californica*). A second visit to the population noted significant natural herbivary and few if any seeds were set.

Additional Potential Sensitive Plant Species

Seven additional sensitive plant species are known from the area: Jacumba milk-vetch, Fremont barberry (*Berberis fremontii*), Tecate tarplant, Delicate clarkia (*Clarkia delicata*), Sticky geraea (*Geraea viscida*), Narrow-petaled rein orchid (*Pipeia lepropetala*) and Engelmann oak (*Quercus engelmannii*). All of the species would have been observable during the surveys performed onsite. Jacumba milk-vetch, Sticky geraea and Tecate tarplant were observed in the area, confirming that they were identifiable, but they were not present within the project itself.

4.2.5 Sensitive Animals

No rare, threatened, or endangered animal species were observed on-site. Four sensitive animal species, the San Diego horned lizard, turkey vulture, San Diego black-tailed jackrabbit, and San Diego woodrat were observed onsite. Each of these species is discussed below.

San Diego horned lizard (*Phrynosoma coronatum blainvillei*)

One San Diego horned lizard was observed onsite (Figure 3).

Turkey Vulture (*Cathartes aura*)

The turkey vulture is a County sensitive species. According to Unitt (1984) this species is a fairly common to common spring and fall migrant, uncommon to locally common winter visitor and rare to uncommon summer resident of San Diego County. One turkey vulture was observed overhead during the wildlife surveys.

San Diego black-tailed jackrabbit (*Lepus californicus benettii*)

The San Diego black-tailed jackrabbit is both a state and federal Species of Concern. This species typically occurs in open grassland and sparsely vegetated areas. This species was identified onsite indirectly from the presence of scat.

San Diego desert woodrat (*Neotoma lepida intermedia*)

The San Diego desert woodrat is a state and federal Species of Concern. This species was identified onsite indirectly by the presence of nests and scat. The nests were primarily associated with rock outcrops.

Additional Potential Sensitive Wildlife Species

Twenty-one sensitive species have the potential to occur onsite and are discussed in Appendix D. Of the twenty-one species, one, the mountain lion (*Felis concolor*), has a high potential to occur. A track was observed within the project vicinity but not on the project site. Two sensitive species, the ringtail and southern mule deer have a moderate potential to occur onsite. The ringtail is a state species of concern. The mountain lion and southern mule deer are County sensitive species. In addition, one federally listed species, the Quino checkerspot butterfly, has a low potential to occur onsite. This species is discussed below.

Quino Checkerspot Butterfly (*Euphydryas editha quino*)

Status: Federally listed as Endangered.

A focused survey for the federally endangered quino checkerspot butterfly (QCB) was conducted onsite by USFWS permitted biologist Andrew Pigniolo (permit # PRT-840623). A complete copy of the report is included as Appendix F and summarized here. Survey methods followed those outlined in the Year 2002 Survey Protocol for the Quino checkerspot butterfly (USFWS 2002). Surveys consisted of meandering transects within all of the open native vegetation on site, with proportionally greater time was spent within areas supporting nectar plants, potential host plants, and on the minor ridges. The primary larval host plant, dwarf plantain (*Plantago erecta*) was not observed onsite. Two other plant species that may support larval QCB were observed onsite: Southern Chinese houses (*Collinsia concolor*) and White snapdragon (*Antirrhinum coulterianum*). Potential

nectar sources for QCB were plentiful including moderately dense populations of popcorn flower (*Cryptantha/Plagiobothrys* spp.), chia (*Salvia columbariae*), and Goldfields (*Lasthenia californica*). Fourteen butterfly species were observed onsite (Appendix B).

QCB was not observed onsite during the survey. Although several potential host plants and numerous nectar plants were observed the site. The site lacks the primary host plant, dwarf plantain. The site does not support clay soils or well developed cryptogrammic crusts. Vegetation on the site is fairly mesic, supporting primarily tall-statured chaparral species. Openings included numerous nectar sources and the project area includes a ridgeline but the Quino Checkerspot was not observed. Because native vegetation is dynamic over time and QCB populations are spatially and temporally dynamic, it is difficult to definitively determine its absence. Based on this survey, the current site conditions, and observations of occupied QCB habitat, the probability of QCB occurring the Garza Property is low.

4.3 Results for Powell –TPM 20798

The following discussion summarizes the existing biological resources on the site including habitats, plant and wildlife species.

4.3.1 Vegetation

The site supports three habitat types, redshank chaparral, semi-desert chaparral and developed.

Redshank Chaparral (Habitat Code: 37300)

An area of undisturbed red shank chaparral is located in a lower slightly more mesic area in the northwestern portion of the project area. This area is a slightly depressed north facing slope that drains nearby areas. Red shank chaparral covers approximately 20.0 acres of the project. It consists of nearly pure stands of tall (between 2 to 4 meters) red shank. A variety of understory species including moss bedstraw, and basketbush are also present. Small sandy openings include wolly-star, desert beauty, spinebract and several species of popcorn flower (*Cryptantha/Plagiobothrys* spp.).

Semi-desert chaparral (Habitat Code: 37121)

Undisturbed semi-desert chaparral covers approximately 17.7 acres of the site and consists of moderate-statured stands (between 1.5 and 3 meters) of a variety chaparral species. Chamise and scrub oak are dominant but several other species are common: redshank, birch-leaved mountain-mahogany, buckbrush, Mexican manzanita, bigberry manzanita, holly-leaf redberry, and holly-leaf cherry. An ephemeral drainage occurs within this habitat.

This chaparral forms a mosaic with sandy openings and open areas with low shrubs dominated by annual vegetation. Some of the sandy openings are completely dominated by native annuals while portions of the highest ridge include openings with a low cover

of sub-shrubs including flat-top buckwheat, and deer weed, with a few individuals of California ephedra. These natural openings include few weed species and have not yet been invaded by non-natives. This habitat allows for seasonal growth of many annual species dominated by goldfields, wild-heliotrope, chia, silver puffs, mustard evening primrose, field suncup, wolly-star, ball gilia, desert beauty, spinebract and several species of popcorn flower.

Developed (Habitat Code: 12000)

Approximately 2.30 acres of developed habitat occurs onsite. This area is associated with a house under construction and dirt access roads.

Rock Outcrops

Several rock outcrops occur onsite.

4.3.2 Wildlife

A total of forty-one wildlife species were identified onsite. These included sixteen invertebrate species, three reptile species, fifteen bird species, and seven mammal species. A complete list of wildlife species observed on-site is included as Appendix B.

Invertebrates

The dominant invertebrate species observed onsite were butterflies. Of the sixteen invertebrates observed onsite, all but four were butterflies. Common butterflies observed onsite include the common white, Behr's metalmark, funereal duskywing and California sister. In addition, grasshoppers, lady bugs, red ants and velvet ants were observed onsite.

Reptiles

Sagebrush lizards (*Sceloporus graciosus*) were commonly observed sunning on the large rocks throughout the site. Two additional reptile species were observed onsite, unidentified rattlesnake (*Crotalus* spp.) and San Diego horned lizard.

Birds

Birds that would typically occur in the habitats onsite were observed including but not limited to: California thrasher, spotted towhee, California quail, scrub jay, wrentit, and northern flicker. In addition, a pair of turkey vultures were observed overhead.

Mammals

Mammals were primarily detected indirectly by the presence of track, scat, nests or burrows. Mammals detected indirectly onsite include but are not limited to coyote, desert woodrat, and grey fox. Two species were detected by direct observation, and desert cottontail and brush rabbit.

4.3.3 Sensitive Habitats

Redshank chaparral and semi-desert chaparral would be considered sensitive habitats. Each of these habitats is discussed below.

Redshank Chaparral

Although still a relatively plentiful habitat, Redshank chaparral is considered a sensitive habitat land within the RPO.

Semi-desert chaparral

Although still a relatively plentiful habitat, semi-desert chaparral is considered a sensitive habitat land within the RPO.

4.3.4 Sensitive Plants

Sensitive plant surveys were performed in addition to the focused QCB surveys. In addition to the spring survey, a fall survey was performed specifically to determine the presence or absence of Tecate tarplant. No threatened or endangered plant species were observed onsite. One sensitive plant species, Desert beauty (*Linanthus bellus*) was observed onsite. This species is discussed below.

Linanthus bellus (Desert beauty)

Scattered populations of desert beauty are present in sandy openings within the project area (Figure 3). Seven populations were present on sandy slopes. The estimated number onsite is 1200 individuals.

Additional Potential Sensitive Plant Species

Eight additional sensitive plant species are known from the area: Jacumba milk-vetch, Fremont barberry, delicate clarkia (*Clarkia delicata*), Tecate tarplant, Sticky geraea, narrow-petaled rein orchid, Engelmann oak and southern jewel flower. All of the species would have been observable during the surveys performed onsite and were not identified onsite.

4.3.5 Sensitive Animals

No rare, threatened, or endangered animal species were observed on-site. Five sensitive animal species, the San Diego horned lizard, Cooper's hawk, turkey vulture, San Diego black-tailed jackrabbit and San Diego woodrat were observed onsite. Each of these species are discussed below.

San Diego horned lizard (*Phrynosoma coronatum blainvillei*)

Four San Diego horned lizard were observed onsite (Figure 3).

Cooper's Hawk (*Accipiter cooperi*)

One individual of this species was observed onsite.

Turkey Vulture (*Cathartes aura*)

Two turkey vultures were observed overhead during the wildlife surveys.

San Diego black-tailed jackrabbit (*Lepus californicus benettii*)

This species was identified onsite indirectly from the presence of scat.

San Diego desert woodrat (*Neotoma lepida intermedia*)

The San Diego desert woodrat is a state and federal Species of Concern. This species was identified onsite indirectly by the presence of nests and scat. The nests were primarily associated with rock outcrops.

Additional Potential Sensitive Wildlife Species

Twenty-one sensitive species have the potential to occur onsite and are discussed in Appendix D. Of the twenty-one species, one, the mountain lion (*Felis concolor*), has a high potential to occur. Evidence of this species was observed in the project vicinity. Two sensitive species, the ringtail and southern mule deer have a moderate potential to occur onsite. The ringtail is a state species of concern. The southern mule deer and mountain lion are a County sensitive species. In addition, one federally listed species, the Quino checkerspot butterfly, has a low potential to occur onsite. This species is discussed below.

Quino Checkerspot Butterfly (*Euphydryas editha quino*)

Status: Federally listed as Endangered.

A focused survey for the federally endangered quino checkerspot butterfly (QCB) was conducted onsite by USFWS permitted biologist Andrew Pigniolo (permit # PRT-840623). A complete copy of the report is included as Appendix F and summarized here. Survey methods followed those outlined in the Year 2002 Survey Protocol for the Quino checkerspot butterfly (USFWS 2002). Surveys consisted of meandering transects within all of the open native vegetation on site, with proportionally greater time was spent within areas supporting nectar plants, potential host plants, and on the minor ridges. The primary larval host plant, dwarf plantain (*Plantago erecta*) was not observed onsite. Two other plant species that may support larval QCB were observed onsite: Southern Chinese houses (*Collinsia concolor*) and White snapdragon (*Antirrhinum coulterianum*). Potential nectar sources for QCB were plentiful including moderately dense populations of popcorn flower (*Cryptantha/Plagiobothrys* spp.), chia (*Salvia columbariae*), and Goldfields (*Lasthenia californica*). Twelve butterfly species were observed onsite (Appendix B).

QCB was not observed onsite during the survey. Although several potential host plants and numerous nectar plants were observed the site. The site lacks the primary host plant, dwarf plantain. The site does not support clay soils or well developed cryptogrammic crusts. Vegetation on the site is fairly mesic, supporting primarily tall-statured chaparral species. Openings included numerous nectar sources and the project area includes a ridgeline but the Quino Checkerspot was not observed. Because native vegetation is dynamic over time and QCB populations are spatially and temporally dynamic, it is difficult to definitively determine its absence. Based on this survey, the current site conditions, and observations of occupied QCB habitat, the probability of QCB occurring the Powell Property is low.

4.4 Wildlife Corridors

Wildlife corridors exist on both regional and local levels. Within the region of the project sites the most probable wildlife corridor would be associated with Campo Creek which is approximately ¾ miles north of the project site. The sites may be used on a local level as a corridor. Several man-made footpaths occur onsite and it is likely that wildlife would also use these paths. In addition, the southern coast live oak riparian forest located in the northeastern corner of the sites may serve as a local corridor.

5.0 REGULATORY REQUIREMENTS PERTAINING TO WETLANDS

The limits of jurisdiction for each agency are also discussed below.

Army Corps of Engineers (ACOE) – Clean Water Act

Pursuant to Section 404 of the Clean Water Act, any on-site wetlands and waters of the U.S. would be subject to permit provisions regulating activities within their boundaries. These provisions are enforced by the ACOE, as well as the EPA, with technical input from the USFWS. Three factors are considered in the designation of wetlands: the presence of hydrophytic vegetation, hydric soils, and site hydrology. According to the latest ACOE methodology, all three wetland indicators must be present to make a jurisdictional ruling (Environmental Laboratory 1987). Areas indicated as wetlands by all three factors during the rainy season may lack the indicators of hydrology and/or vegetation during the dry season, or the vegetation may have been altered or removed through human disturbance. Such areas may still be regarded as wetlands by resource agencies.

In addition, the ACOE has jurisdiction over “waters of the United States”. Waters of the United States are defined in 33 CFR part 328 (referred to as “waters”). The lateral limits of the jurisdiction of waters maybe divided into three categories, territorial seas, tidal waters and non-tidal waters. 33 CFR part 328.3 provides the definition of waters of the United States as follows:

> (a) The term *waters of the United States* means
>
> (1) all waters which are currently used, or were used in the past, or maybe susceptible to use in interstate or foreign

commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters:

(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

(ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(iii) Which are or could be used for industrial purpose by industries in interstate commerce;

(4) All impoundments of waters otherwise defined as waters of the United States under the definition;

(5) Tributaries of waters identified in (a) (1) through (4) of this section;

(6) The territorial seas

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section.

Waste treatment systems, including treatments of ponds or lagoons designed to meet the requirements if CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

(8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding the CWA remains with the Environmental Protection Agency (EPA).

(b) The term *wetlands* means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

(c) The term *adjacent* means bordering, contiguous or neighboring. Wetlands separated from other waters of the United States by man made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

(d) The term *high tide line* means the line of intersection of the land with the water's surface to the maximum height reached by a rising tide……

(e) The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris,

or other appropriate means that consider the characteristics of the surrounding areas.

(f) The term *tidal waters* means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun….

The limits of jurisdiction in non-tidal waters is defined in 30 CFR part 328.4 (c). When non-tidal waters occur in the absence of adjacent wetlands, the jurisdiction extends to ordinary high water mark. Based on the above definition of waters of the United States and limits of jurisdiction, Waters of the U.S. occur onsite and would be located at the same location as the RPO wetland line identified on Figure 3.

California Department of Fish and Game – Streambed Alteration Program

The CDFG regulates wetlands under Section 1601/1603 of the California Fish and Game Code through their Streambed Alteration Agreement Program. Any alteration of any stream course within the State of California requires a Streambed Alteration Agreement from the CDFG. Section 1601 pertains to public projects where section1603 applies to private projects and specifically states: "It is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity…"

A stream is defined by the California Code of Regulations (14 CCR 1.72) as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic wildlife. This includes watercourses having a surface or subsurface flow that supports or has supported riparian habitat.

The limits of CDFG jurisdiction are defined in the code (Section 1601/1603) as the bed, channel, or bank of any river, stream or lake designated by the department in which there is at any time existing fish or wildlife resource or from which these resources derive benefit ….

The CDFG jurisdiction would be larger then the RPO wetlands and ACOE wetlands onsite. The CDFG jurisdiction would extend to the limits of the southern coast live oak riparian forest and/or top of bank. In addition, the CDFG may take jurisdiction over the ephemeral drainages onsite.

County of San Diego Resource Protection Ordinance

The County of San Diego Resource Protection Ordinance defines wetlands under Article II, item 16. as: "All lands which are transitional between terrestrial and aquatic where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are 'wetlands":

a. At least periodically, the land supports predominately hydrophytes;

b. The substratum is predominantly undrained hydric soils; or
c. The substratum is nonsoil and is saturated with water or covered by water at some time during the growing season each year.

The resource protection ordinance wetlands were mapped using the presence of any of one criteria listed above. The creek is not dominated by hydrophytic vegetation therefore hydrology was the primary indicator used to identify the RPO wetland limit. Where hydrophytic vegetation was present the limits include either the top of bank or the drip-line, whichever is greater. The approximate limits of the RPO wetland are mapped on Figure 3.

6.0 ANTICIPATED PROJECT IMPACTS BY PROJECT

This section addresses potential direct and indirect impacts to biological resources that would result from implementation of the proposed projects, and provides analyses of significance for each potential impact.

Direct Impacts are immediate impacts resulting from the permanent removal of habitat. For purposes of this assessment, all biological resources outside of the proposed open space and existing road easements are considered 100 percent lost. The portions within the existing road easements are considered impact neutral for the reasons discussed below.

Indirect Impacts result from changes in land use adjacent to natural habitat and primarily result from adverse "edge effects;" either short-term indirect impacts related to construction or long-term, chronic indirect impacts associated with urban development. During construction of the project, short-term indirect impacts include dust and noise which could temporarily disrupt habitat and species vitality or construction related soil erosion and run-off. Long-term indirect impacts may include intrusions by humans and domestic pets, noise, lighting, invasion by exotic plant and wildlife species, use of toxic chemicals (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, litter, fire, and hydrological changes (e.g., groundwater level and quality).

Thresholds of Significance

The evaluation of whether or not an impact to a particular biological resource is significant must consider both the resource itself and the role of that resource in a regional context. Substantial impacts are those that contribute to, or result in, permanent loss of an important resource, such as a population of a rare plant or animal. Impacts may be important locally because they result in an adverse alteration of existing site conditions, but considered not significant because they do not contribute substantially to the permanent loss of that resource regionally. The severity of an impact is the primary determinant of whether or not that impact can be mitigated to a level below significant. Generally, there are three levels of adverse impacts associated with biological resources: significant, locally important, and not significant.

6.1 Bennett Project Minor Subdivision Potential Impacts –TPM 20784

The proposed project is a minor subdivision of a 49.74 gross acre parcel into four single-family residential parcels plus a remainder parcel. The five parcels have gross sizes ranging from 8.56 to 14.22 acres. The project includes a private road, "Street B" (Figure 3), along the southern property line. Proposed open space is identified on Figure 3. The proposed project also includes a 26.59 acre biological open space easement. The open space does not include the existing developed area due to the need to continue to use the existing well in this area. Table 3 below lists potential impacts and onsite conservation by habitat.

Table 2
Habitat Acreages and Potential Impacts of the Bennett Project

Habitat	Total Acres	Impact Neutral (acres)	Direct Impacts (acres)	Mitigation Ratio	Onsite Conservation (acres)
Southern Coast Live Oak Riparian Forest	4.79	3.34* 0.25**	0	NA	4.54***
Redshank Chaparral	6.12	NA	3.24	1:1	2.88
Semi-Desert Chaparral	36.28	1.89* 0.74**	16.37	1:1	19.17***
Developed	2.55		2.55	NA	NA
Total	**49.74**	**6.22**	**22.16**		**26.59****

* encompassed in RPO Wetland and Buffer
** encompassed in Road Easements
*** Includes acreages in RPO Wetland and Buffer
**** Excludes the 0.65 acres of developed within the area on Figure 3

The acreages deemed impact neutral are encompassed within the existing road easements and RPO wetlands and buffer. The project is not proposing to make any improvements in the road easements however the project also cannot include these areas within the proposed biological open space easement. As a result these areas are being treated as impact neutral for the purposes of this analysis. The portions included within the RPO wetland and buffer are encompassed within the open space easement, however they can not be used as mitigation and as a result are treated as impact neutral.

6.1.1 Bennett Significance of Impacts

Generally, there are three levels of adverse impacts associated with biological resources: significant, locally important, and not significant. These levels of impacts were applied to the project site and are used below in the discussion of specific potential impacts. Figure 3 details the proposed impact areas and open space.

<u>Semi-Desert Chaparral</u>

Approximately 16.37 acres of this habitat onsite could be impacted as a result of the proposed project. This acreage includes all of the semi-desert chaparral outside of the proposed open space easement with the exception of the 0.65 acres included within the existing road easement. These impacts would be considered locally important.

Red Shank Chaparral

Approximately 3.24 acres of this habitat onsite could be impacted as a result of the proposed project. This acreage includes all of the red shank chaparral outside of the proposed open space easements. These impacts would be considered locally important.

Sensitive Plant Species

Four sensitive plant species: Sticky Geraeaa (*Geraeaa viscida*), Jacumba milkvetch (*Astragalus douglasii* var. *perstrictus*), Tecate tarplant (*Deinandra floribunda*), and Desert beauty (*Linanthus bellus*) were documented onsite. Tecate tarplant and Jacumba milkvetch are County list A species, while Sticky Geraeaa and Desert beauty are list B species. County guidelines recommend an 80% avoidance of plants on County lists A and B. As designed, impacts may occur to approximately 210 individuals of the desert beauty population onsite. All of the other sensitive plant species are encompassed within the proposed open space. Impacts to approximately 38% of the desert beauty population onsite would be considered significant. The current open space design provides a minimum of a 30 foot buffer to the protected sensitive plants.

Sensitive Wildlife Species

Impacts to four sensitive species observed onsite, San Diego horned lizard, Cooper's hawk, mountain lion and the San Diego desert woodrat would be considered locally important. In addition, impacts to the San Diego black-tailed jackrabbit which has a high potential to occur would be considered locally important.

6.2 Garza Project Minor Subdivision Potential Impacts –TPM 20777

The proposed project is a minor subdivision of a 53.33 gross acre parcel into four parcels plus a remainder parcel. The four parcels have gross sizes ranging from 8.48 to 9.09 acres, and the remainder parcel is 18.78 acres. The proposed project also includes a 27.95 acre biological open space easement. Biological resources and proposed open space are depicted in Figure 3. Table 4, below, identifies the potential impacts and conservation by habitat type.

Table 3
Habitat Acreages and Potential Impacts for the Garza Project

Habitat	Total Acres	Impact Neutral (acres)	Direct Impacts (acres)	Mitigation Ratio	Onsite Conservation (acres)
Southern Coast Live Oak Riparian Forest	1.71	0.19	0	NA	1.52
Red Shank Chaparral	1.66	0.04	0	NA	1.62
Semi-Desert Chaparral	49.96	2.73	22.42	1:1	24.81
Total	**53.33**	**2.96**	**22.42**		**27.95**

The acreages deemed impact neutral are encompassed within the existing road easements. The project is not proposing to make any improvements in these areas however the project also can not include these areas within the proposed biological open space

easement. As a result these areas are being treated as impact neutral for the purposes of this analysis.

6.2.1 Garza Significance of Impacts

Generally, there are three levels of adverse impacts associated with biological resources: significant, locally important, and not significant. These levels of impacts were applied to the project site and are used below in the discussion of specific potential impacts. Figure 3 details the proposed impact areas and open space.

Semi-Desert Chaparral

Approximately 22.42 acres of this habitat could be impacted as a result of the proposed project. This acreage includes all of the semi-desert chaparral outside of the proposed open space easement with the exception of the 2.73 acres included within the existing road easement. These impacts would be considered locally important.

Red Shank Chaparral

No impacts are proposed to this habitat. Approximately 1.62 acres of this habitat is included in the proposed open space. The remaining 0.04 acres are included within the existing road easement along the southern property line. Since no improvements are proposed in the easement as part of this project, this area is being considered impact neutral.

Southern Coast Live Oak Riparian Forest

No impacts are proposed to the southern coast live oak riparian forest. Approximately 1.52 acres of this habitat is included within the proposed open space. The remaining 0.19 acres of this habitat is included within the existing road easement along the eastern property line. Since no improvements are proposed in the easement as part of this project, this area is being considered impact neutral.

RPO Wetland and Wetland Buffer

The RPO wetland and the proposed buffer constitute 0.03 acres of the of southern coast live oak riparian forest. RPO defines "Wetland buffer" areas as lands which provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community. RPO does not specify a required buffer width, however, County Policy as stated in the Biological Mapping Requirements (June 2002) is that the County generally requires buffers a minimum of 25 feet and a maximum of 200 feet. Factors to consider when determining the appropriate width of the buffer include: existence of hydrophytic vegetation, condition of the existing wetland, whether the wetland/buffer serve as a wildlife corridor, existence of sensitive species, connectivity and condition of the wetland up and down stream. A 50 foot buffer is included within the open space where the existing road easement does not preclude it. No

impacts are proposed to the RPO wetland or wetland buffer. The existing well within the RPO buffer will continue to be used.

Sensitive Plant Species

Two sensitive plant species were documented onsite, desert beauty and southern jewel-flower. Desert beauty is a County list B species and southern jewel-flower is a County List A species. County policy mandates an 80% avoidance of plants on County lists A and B. The project is not proposing impacts to either of these species. The populations are included within the proposed open space to the maximum extent practicable. The exception being where the populations extend into the existing road easements which are not being proposed to be improved as part of this project. The road easements can not be included within the proposed open space however.

Sensitive Wildlife Species

Impacts to four sensitive species observed onsite, the San Diego horned lizard, the turkey vulture, the San Diego black-tailed jackrabbit and the San Diego desert woodrat would be considered locally important. In addition, impacts to the mountain lion which has a high potential to occur.

6.3 Powell Project Minor Subdivision Potential Impacts –TPM 20798

The proposed project is a minor subdivision of a 40.0 gross acre parcel into four single-family residential parcels. The four parcels have gross sizes ranging from 9.11 to 11.07 acres. The project includes a private road (Figure 3) to provide access to the proposed parcels. The proposed project also includes 11.43 acres of biological open space. Off-site impacts will occur as a result of the proposed private access road, however they have been included in the impacts calculated for TPM 20777. Table 5, below, identifies the impacts and proposed onsite open space by habitat.

Table 4
Habitat Acreages and Potential Impacts of the Powell Project

Habitat	Total Acres	Impact Neutral (acres)	Direct Impacts (acres)	Mitigation Ratio	Onsite Conservation (acres)
Red Shank Chaparral	20.0	1.10	15.55	1:1	3.35
Semi-Desert Chaparral	17.7	0.45	9.17	1:1	8.08
Developed	2.3	NA	2.3	NA	NA
Total	**40.0**	**1.55**	**27.02**		**11.43**

The acreages deemed impact neutral are encompassed within the existing road easements. The project is not proposing to make any improvements in these areas however the project also can not include these areas within the proposed biological open space easement. As a result these areas are being treated as impact neutral for the purposes of this analysis.

6.3.1 Powell Significance of Impacts

Generally, there are three levels of adverse impacts associated with biological resources: significant, locally important, and not significant. These levels of impacts were applied to the project site and are used below in the discussion of specific potential impacts.

Semi-Desert Chaparral

Approximately 9.17 acres of this habitat onsite could be impacted as a result of the proposed project. This acreage includes all of the semi-desert chaparral outside of the proposed open space easements with the exception of the 0.45 acres included within the existing road easement. These impacts would be considered locally important.

Red Shank Chaparral

Approximately 15.55acres of this habitat onsite could be impacted as a result of the proposed project. This acreage includes all of the red shank chaparral outside of the proposed open space easements with the exception of the 1.10 acres included within the existing road easement. These impacts would be considered locally important.

Sensitive Plant Species

One sensitive plant species, desert beauty was documented onsite. Desert beauty is a County List B species. County guidelines recommend an 80% avoidance of plants on County Lists A and B. As currently designed, impacts may occur to 390 individuals of the desert beauty. The total population onsite is estimated to be 1220 individuals based on counts. The proposed impacts to 32% of the population would be significant.

Sensitive Wildlife Species

Impacts to five sensitive species observed onsite, San Diego horned lizard, Cooper's hawk, turkey vulture, San Diego black-tailed jackrabbit and the San Diego desert woodrat would be considered locally important. In addition, impacts to the mountain lion which has a high potential to occur would be considered locally important.

Wildlife Corridors

The project has proposed open space adjacent to the proposed open space as part of TPM 20777. This area can continue to serve as a local wildlife movement corridor. The blue-line stream that initiates on TPM 20777 and continues north is a tributary to Campo Creek approximately 1 mile to the northwest. Campo Creek and the associated well developed woodland likely serves as a regional wildlife corridor. No significant impacts will occur to either local or regional wildlife corridors as a result of the proposed project.

7.0 CUMULATIVE IMPACTS

This section addresses the combined potential cumulative impacts to biological resources from the Bennett, Powell, and Garza projects that would result from implementation of the combined proposed project, and provides analyses of significance for each potential impact. Additionally Section 7.3 discusses cumulative impacts of other reasonably foreseeable projects.

Cumulative Impacts refer to incremental individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor, but collectively significant as they occur over a period of time.

7.1 Combined Proposed Project and Potential Impacts

The Bennett project is a minor subdivision of a 49.74 gross acre parcel into four single-family residential parcels plus a remainder parcel. The five parcels have gross sizes ranging from 8.56 to 14.22 acres. The Bennett project also includes a 26.59 acre open space easement. The Garza project is a minor subdivision of a 53.33 gross acre parcel into four parcels plus a remainder parcel. The four parcels have gross sizes ranging from 8.48 to 9.09 acres, and the remainder parcel is 18.77 acres. The Garza project also includes a 27.95 acre biological open space easement. The Powell project is a minor subdivision of a 40 acre parcel into four single-family residential parcels. The four parcels have gross sizes ranging from 9.11 to 11.07 acres. The Powell project proposes 11.43 acres of open space. The combined biological open space equals 65.95 acres. Table 6 below identifies the combined impact of the impacts and proposed onsite open space of the combined projects by habitat.

Table 5
Combined Habitat Acreages and Potential Impacts for the Bennett, Powell, and Garza Projects

Habitat	Total Acres	Impact Neutral (acres)	Direct Impacts (acres)	Mitigation Ratio	Onsite Conservation (acres)
Southern Coast Live Oak Riparian Forest	6.5	3.34* 0.44**	0	NA	6.06***
Redshank Chaparral	27.78	1.14**	18.79	1:1	7.85
Semi-Desert Chaparral	103.94	1.89* 3.92**	47.98	1:1	52.04***
Developed	4.85	NA	4.85	NA	NA
Total	**143.07**	**10.73**	**71.62**		**65.95**

* Encompassed within RPO Buffer and RPO Wetlands
** Encompassed within Road Easements
*** Includes acreage within RPO Wetlands and Buffer shown under Impact Neutral with *

The acreages deemed impact neutral are encompassed within the existing road easements and RPO wetlands and buffer. The project is not proposing to make any improvements in the road easements however the project also cannot include these areas within the

proposed biological open space easement. As a result these areas are being treated as impact neutral for the purposes of this analysis. The portions included within the RPO wetland and buffer are encompassed within the open space easement, however they can not be used as mitigation and as a result are treated as impact neutral.

7.2 Significance of Combined Potential Impacts

Direct impacts may occur to redshank chaparral and semi-desert chaparral as a result of the proposed project. No impacts will occur to the southern coast live oak riparian forest or RPO Wetlands and Buffer.

Southern Coast Live Oak Riparian Forest (Garza)

No impacts are proposed to the southern coast live oak riparian forest. Approximately 6.06 acres of this habitat is included within the proposed open space. The remaining 0.44 acres of this habitat are included within the existing road easement along the eastern property line. Since no improvements are proposed in the easement as part of this project, this area is being considered impact neutral. Additionally 3.34 acres of this habitat within the proposed open space are encompassed within the RPO Wetland and Buffer. This acreage can not be used as mitigation to off-set impacts, it is considered impact neutral.

Redshank Chaparral

Approximately 18.79 acres of this habitat onsite could be impacted as a result of the proposed project. This acreage includes all of the redshank chaparral outside of the proposed open space easements with the exception of the 1.14 acres included within existing road easements. These impacts would be considered locally important.

Semi-Desert Chaparral

Approximately 47.98 acres of this habitat onsite could be impacted as a result of the proposed project. This acreage includes all of the semi-desert chaparral outside of the proposed open space easements with the exception of 3.92 acres included within existing road easements. These impacts would be considered locally important.

RPO Wetland and Wetland Buffer (Bennett)

The RPO wetland and the proposed buffer constitute 3.34 acres of the southern coast live oak riparian forest and 1.89 acres of the semi-desert chaparral. A 50 foot buffer is included within the open space where the existing road easement does not preclude it. No new impacts are proposed to the RPO wetland or wetland buffer. The existing well on the Bennett property within the RPO buffer will continue to be used.

Sensitive Plant Species

Five sensitive plant species: Sticky Geraeaa (*Geraeaa viscida*), Jacumba milkvetch (*Astragalus douglasii* var. *perstrictus*), Tecate tarplant (*Deinandra floribunda*), southern jewel-flower (*Streptanthus campestris*), and Desert beauty (*Linanthus bellus*) were

documented onsite. Tecate tarplant, Southern jewel-flower and Jacumba milkvetch are County list A species, while Sticky Geraeaa and Desert beauty are list B species. County guidelines recommend an 80% avoidance of plants on County lists A and B.

The desert beauty population which occurs on this three project sites totals approximately 2225 individuals. Presumably the population also extends to the other undeveloped lands within the project vicinity. The three projects cumulatively impact 25% of the desert beauty population on the three project sites. However the population probably is not limited to the three project sites and the impacts likely represent a smaller impact to the population. The impact exceeds the County goals as a result of trying to balance the need for large contiguous blocks of open space with impacts to desert beauty. This impact would be considered locally important.

No impacts are proposed to the remainder of the sensitive plant species.

Sensitive Wildlife Species

Impacts to six sensitive species observed onsite, San Diego horned lizard, Cooper's hawk, turkey vulture, San Diego black-tailed jackrabbit, mountain lion, and the San Diego desert woodrat would be considered locally important.

Wildlife Corridors

The combined project has proposed open space in large two large contiguous blocks encompassing the southern coast live oak riparian forest. Additionally the project has proposed a large block of open space that is contiguous from west to east The coast live oak woodland and adjacent uplands may serve as a local wildlife corridor. This area can continue to serve as a local wildlife movement corridor. The blue-line stream is a tributary to Campo Creek approximately 1 mile to the northwest. Campo Creek and the associated well developed woodland likely serves as a regional wildlife corridor. Although the block of proposed open space on the Powell project is not contiguous with the adjacent block to the north it is separated only by a narrow gravel road. The road will not substantially impede wildlife movement due to the width and low level of use that will be associated with the road. Also trails and dirt roads exist on all of the sites that are likely used by wildlife to traverse the site. No significant impacts will occur to either local or regional wildlife corridors as a result of the proposed project.

7.3 Cumulative Impacts of Other Reasonably Foreseeable Projects

A review was performed using the County database to determine projects that had been submitted for a discretionary permit within 1 mile of the project site. This review resulted in the identification of the following three projects:

- TPM 20252 – Ralph Property
- TPM 20740 – Dart Property
- TPM 20774 – Madsen Property

Subsequent to submittal TPM 20740 and TPM 20774 have been withdrawn. TPM 20525 has been approved. The Negative Declaration assumed impacts to 9.72 acres of northern mixed chaparral. An open space easement was placed on approximately 3.75 acres of oak woodland and chaparral. The details were not available within the file.

As a result the proposed projects in combination with foreseeable projects could contribute to significant cumulative impacts. Implementation of County resource planning policies and ordinances to all discretionary projects will ensure that cumulative impacts to sensitive habitat and dependent species are mitigated to a less than significant level.

8.0 RECOMMENDED MITIGATION

Under CEQA, mitigation is required for all significant biological impacts (i.e. impacts within highly constrained areas). In addition, the CDFG 1600 and the ACOE 404 permit process generally require mitigation for the loss of wetland resources. The following mitigation measures are recommendations to locally important biological impacts. Although mitigation measures are not often required for locally important impacts, local jurisdictions often implement these measures to minimize cumulative impacts within the region.

According to Appendix G of the State CEQA guidelines, the proposed project would have a potentially significant impact to onsite biological resources if it would:

- Have a substantial adverse affect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The following mitigation measures are recommended to reduce potential impacts to below a level of significance and to preclude contributing a significant cumulative impact from the proposed project.

Habitats

Potential impacts to 47.98 acres of semi-desert chaparral and 18.79 acres of redshank chaparral, will be mitigated at a 1:1 ratio with chaparral, in conformance with County Policy. This will result in a mitigation acreage of 66.77 acres of similar habitat. The proposed open space easement (65.95 acres) (Figure 3) includes 52.04 acres (1.89 acres are encompassed in the RPO Wetland and Buffer and can not be used as mitigation) of semi-desert chaparral and 7.85 acres of redshank chaparral for a total of 59.89 acres of chaparral. An additional 6.06 acres of southern coast live oak riparian forest is also included within the proposed open space making the total proposed open space compose 65.95 acres. This project will require the acquisition of 8.77 acres of semi-desert chaparral, redshank chaparral or similar habitat off-site. Together the proposed open space and off-site mitigation mitigates the locally important impact and ensures that the proposed project does contribute a significant cumulative impact within the region.

Sensitive Plant Species

The desert beauty population which occurs on this three project sites totals approximately 2225 individuals. Presumably the population also extends to the other undeveloped lands within the project vicinity. The three projects cumulatively impact 25% of the desert beauty population on the three project sites. However the population probably is not limited to the three project sites and the impacts likely represent a smaller impact to the population. The impact exceeds the County goals as a result of trying to balance the need for large contiguous blocks of open space with impacts to desert beauty. The current open space design provides a minimum of a 30 foot buffer to all protected plants with the exception of the desert beauty populations on Powell parcel three that is less than 30 feet on the north and south due to the proximity of the required fuel management zones.

Sensitive Wildlife Species

Impacts to the sensitive wildlife species observed onsite and with a high and moderate potential to occur will be mitigated through the habitat based mitigation for impacts to the semi-desert chaparral and redshank chaparral.

RPO Wetland and Buffer

The RPO wetland and RPO buffer are proposed to be placed in open space easement. RPO defines "Wetland buffer" areas as lands which provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community. RPO does not specify a required buffer width, however, County Policy as stated in the Biological Mapping Requirements (June 2002) is that the County generally requires buffers a minimum of 25 feet and a maximum of 200 feet.

Factors to consider when determining the appropriate width of the buffer include: existence of hydrophytic vegetation, condition of the existing wetland, whether the wetland/buffer serve as a wildlife corridor, existence of sensitive species, connectivity and condition of the wetland up and down stream. A minimum of a 180 foot buffer is provided by the current open space design where existing improvements, the road and well do not preclude it.

With implementation of the recommended mitigation measures, the project will not contribute towards significant cumulative impacts within the region.

9.0 LITERATURE CITED

ACOE. Army Corps of Engineers 1988. National List of Plant Species that Occur in Wetlands: California.

AOU. American Ornithological Union. 1982. Thirty-Fourth Supplement to the American Ornithologists' Union Checklist of North American Birds. *Auk*99(3).

Bowman, R. H. 1973. *Soil Survey, San Diego Area, California, Part 1.* United States Department of Agriculture. 104 pp. + appendices.

CDFG. California Department of Fish and Game. 1999. List of CDFG Special Status Plants, Animals and Natural Communities of San Diego County, California Natural Diversity Data Base, CDFG Natural Heritage Division, Sacramento.

-- California Department of Fish and Game. 1999. "Endangered, Threatened and Rare Plants of California." State of California Dept. of Fish and Game, Natural Heritage Division, Plant Conservation Program, Sacramento. April 1999.

-- California Department of Fish and Game.2000. CDFG Natural Diversity Data Base. Special Animals. July 2000.

-- California Department of Fish and Game. 2001. "State and Federal Endangered, Rare, and Threatened Animals of California." State of California Resources Agency, Sacramento. October 2001.

CNPS. 2003. *Inventory of Rare and Endangered Plants of California* (sixth edition-electronic version). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, CA x+388pp.

County of San Diego. Biological Mapping Requirements, June 2002.

County of San Diego. Resource Protection Ordinance, Ordinance No. 7968.

Environmental Laboratory. 1987. “Corps of Engineers Wetland Delineation Manual”, Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Federal Register 1994. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Arroyo Southwestern Toad. Final Rule. Federal Register Vol. 59, No. 241, Pages 64859 to 64867.

Hickman, J. C. 1993. The Jepson Manual Higher Plants of California. University of California Press, Berkeley.

Hix, A. B. 1990. “*Sensitivity of San Diego’s Biological Resources: An Informational Report*.” City of San Diego Planning Department, Development and Environmental Planning Division. 29pp. + attachments.

Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California.* Non-game Heritage Program, State of California Department of Fish and Game, Sacramento, CA. 157 p.

Jennings, M. R. 1983. An Annotated Checklist of the Amphibians and Reptiles of Southern California. California Department of Fish and Game 69(3):151-171.

Jones, J.K., *ET AL*. 1992. Revised Checklist of North American Mammals North of Mexico, 1991. Occasional Papers The Museum Texas Tech. University. Number 146. February 7, 1992.

Oberbauer, T. 1996. *Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions*. San Diego Association of Governments, San Diego, CA 6 p.

Powell, J.A., C.L. Hogue. 1979. California Insects. University of California Press, Berkeley.

Stebbins, R. C. 1985. Field Guide to Western Reptiles and Amphibians Houghton Mifflin Co., Boston.

Unitt, P. A. 1984. *Birds of San Diego County*. Memoir 13, San Diego Society of Natural History. 276 pp.

USFWS. U.S. Fish and Wildlife Service. 2001. U.S. Endangered, Threatened and Candidate Plant and Animal Species by State and Lead Region. U.S. Department of the Interior. United States Fish and Wildlife Service Threatened and Endangered Species System, 12/2001.

10.0 CERTIFICATION

This report has been prepared by Robin Church, County Certified Biologist, Andrew Pigniolo, Andrew Drummond and Nicole Bailey.